



03/04/15

## Technical Report for

K.P. Kauffman Company, Inc.

Wattenberg Tank

7591

Accutest Job Number: D68026

Sampling Date: 02/25/15

### Report to:

K.P. Kauffman Company, Inc.  
1675 Broadway Suite 2800  
Denver, CO 80202-4628  
mhattel@msn.com; slaramesa@kpk.com

ATTN: Susana Lara-Mesa

Total number of pages in report: 29



Test results contained within this data package meet the requirements of the National Environmental Laboratory Accreditation Program and/or state specific certification programs as applicable.

A handwritten signature in black ink, appearing to read "Scott Heideman".

Scott Heideman  
Laboratory Director

Client Service contact: Renea Jackson 303-425-6021

Certifications: CO (CO00049), ID, NE (CO00049), ND (R-027), NJ (CO 0007), OK (D9942), UT (NELAP CO00049), TX (T104704511)

This report shall not be reproduced, except in its entirety, without the written approval of Accutest Laboratories.  
Test results relate only to samples analyzed.

# Table of Contents

-1-

<b>Section 1: Sample Summary .....</b>	<b>3</b>
<b>Section 2: Case Narrative/Conformance Summary .....</b>	<b>4</b>
<b>Section 3: Summary of Hits .....</b>	<b>6</b>
<b>Section 4: Sample Results .....</b>	<b>7</b>
<b>4.1: D68026-1: TANK-1 .....</b>	<b>8</b>
<b>4.2: D68026-1F: TANK-1 .....</b>	<b>9</b>
<b>Section 5: Misc. Forms .....</b>	<b>10</b>
<b>5.1: Chain of Custody .....</b>	<b>11</b>
<b>Section 6: Metals Analysis - QC Data Summaries .....</b>	<b>13</b>
<b>6.1: Prep QC MP15341: Ca,Mg,K,Na .....</b>	<b>14</b>
<b>Section 7: General Chemistry - QC Data Summaries .....</b>	<b>24</b>
<b>7.1: Method Blank and Spike Results Summary .....</b>	<b>25</b>
<b>7.2: Blank Spike Duplicate Results Summary .....</b>	<b>26</b>
<b>7.3: Duplicate Results Summary .....</b>	<b>27</b>
<b>7.4: Matrix Spike Results Summary .....</b>	<b>28</b>
<b>7.5: Matrix Spike Duplicate Results Summary .....</b>	<b>29</b>



## Sample Summary

K.P. Kauffman Company, Inc.

Job No: D68026

Wattenberg Tank  
Project No: 7591

Sample Number	Collected Date	Time By	Received	Matrix Code	Type	Client Sample ID
D68026-1	02/25/15	11:55 MDH	02/25/15	AQ	Water	TANK-1
D68026-1F	02/25/15	11:55 MDH	02/25/15	AQ	Water Filtered	TANK-1

## CASE NARRATIVE / CONFORMANCE SUMMARY

**Client:** K.P. Kauffman Company, Inc.

**Job No** D68026

**Site:** Wattenberg Tank

**Report Date** 3/4/2015 3:09:49 PM

On 02/25/2015, 1 sample(s), 0 Trip Blank(s), and 0 Field Blank(s) were received at Accutest Mountain States (AMS) at a temperature of 5 °C. The samples were intact and properly preserved, unless noted below. An AMS Job Number of D68026 was assigned to the project. The lab sample ID, client sample ID, and date of sample collection are detailed in the report's Results Summary.

Specified quality control criteria were achieved for this job except as noted below. For more information, please refer to the analytical results and QC summary pages.

### Metals By Method SW846 6010C

**Matrix:** AQ

**Batch ID:** MP15341

- All samples were digested and analyzed within the recommended method holding time.
- All method blanks for this batch meet method specific criteria.
- Sample(s) D67782-2FMS, D67782-2FMSD, D67782-2FSDL were used as the QC samples for the metals analysis.
- The matrix spike (MS) recovery(s) of Sodium are outside control limits. Spike amount low relative to the sample amount. Refer to lab control or spike blank for recovery information.
- The serial dilution RPD(s) for Calcium, Magnesium, Potassium, Sodium are outside control limits for sample MP15341-SD1. Probable cause due to sample homogeneity.
- MP15341-SD1 for Sodium, Calcium, Magnesium, Potassium: Serial dilution indicates possible matrix interference.

### Wet Chemistry By Method ASTM D287

**Matrix:** ALL

**Batch ID:** GN28869

- The data for ASTM D287 meets quality control requirements.

### Wet Chemistry By Method EPA 1664A

**Matrix:** AQ

**Batch ID:** GP14739

- All samples were prepared and analyzed within the recommended method holding time.
- All method blanks for this batch meet method specific criteria.
- Sample(s) D68033-1MS were used as the QC samples for the HEM Oil and Grease analysis.

### Wet Chemistry By Method EPA 300.0/SW846 9056

**Matrix:** AQ

**Batch ID:** GP14727

- All samples were prepared and analyzed within the recommended method holding time.
- All method blanks for this batch meet method specific criteria.
- Sample(s) D68064-1MS, D68064-1MSD were used as the QC samples for the Chloride, Nitrogen, Nitrate, Nitrogen, Nitrite, Sulfate, Chloride analysis.
- D68026-1 for Nitrogen, Nitrite: Elevated detection limit due to matrix interference.

**Wet Chemistry By Method SM 2540C-2011****Matrix:** AQ**Batch ID:** GN28824

- All samples were analyzed within the recommended method holding time.
- All method blanks for this batch meet method specific criteria.
- Sample(s) D67964-1BDUP were used as the QC samples for the Solids, Total Dissolved analysis.

**Wet Chemistry By Method SM 5310B-2011****Matrix:** AQ**Batch ID:** GP14737

- All samples were prepared and analyzed within the recommended method holding time.
- All method blanks for this batch meet method specific criteria.
- Sample(s) D67989-1DUP, D67989-IMS, D67989-IMSD were used as the QC samples for the Total Organic Carbon analysis.

AMS certifies that data reported for samples received, listed on the associated custody chain or analytical task order, were produced to specifications meeting AMS's Quality System precision, accuracy and completeness objectives except as noted.

Estimated non-standard method measurement uncertainty data is available on request, based on quality control bias and implicit for standard methods. Acceptable uncertainty requires tested parameter quality control data to meet method criteria.

AMS is not responsible for data quality assumptions if partial reports are used and recommends that this report be used in its entirety. This report is authorized by AMS indicated via signature on the report cover.

## Summary of Hits

Page 1 of 1

Job Number: D68026  
Account: K.P. Kauffman Company, Inc.  
Project: Wattenberg Tank  
Collected: 02/25/15

Lab Sample ID	Client Sample ID	Result/ Qual	RL	MDL	Units	Method
Analyte						

D68026-1 TANK-1

Chloride	7650	250		mg/l	EPA 300.0/SW846 9056
HEM Oil and Grease	1170	4.8		mg/l	EPA 1664A
Nitrogen, Nitrate	1.9	0.50		mg/l	EPA 300.0/SW846 9056
Solids, Total Dissolved	14000	10		mg/l	SM 2540C-2011
Specific Gravity by Hydrometer	1.0014				ASTM D287
Sulfate	74.5	25		mg/l	EPA 300.0/SW846 9056
Total Organic Carbon	242	20		mg/l	SM 5310B-2011
pH	7.42			su	SM4500HB + -2011/9040C

D68026-1F TANK-1

Calcium	240000	20000		ug/l	SW846 6010C
Magnesium	38700	10000		ug/l	SW846 6010C
Potassium	148000	50000		ug/l	SW846 6010C
Sodium	4490000	20000		ug/l	SW846 6010C



## Sample Results

---

## Report of Analysis

---

## Report of Analysis

Client Sample ID: TANK-1  
Lab Sample ID: D68026-1  
Matrix: AQ - Water  
Project: Wattenberg Tank

Date Sampled: 02/25/15  
Date Received: 02/25/15  
Percent Solids: n/a

4.1  
4

## General Chemistry

Analyte	Result	RL	Units	DF	Analyzed	By	Method
Chloride	7650	250	mg/l	500	02/26/15 17:37	JB	EPA 300.0/SW846 9056
HEM Oil and Grease	1170	4.8	mg/l	1	03/04/15	SWT	EPA 1664A
Nitrogen, Nitrate	1.9	0.50	mg/l	50	02/26/15 14:46	JB	EPA 300.0/SW846 9056
Nitrogen, Nitrite <sup>a</sup>	< 2.0	2.0	mg/l	500	02/26/15 17:37	JB	EPA 300.0/SW846 9056
Solids, Total Dissolved	14000	10	mg/l	1	02/26/15	AK	SM 2540C-2011
Specific Gravity by Hydromete	1.0014			1	02/27/15	TJ	ASTM D287
Sulfate	74.5	25	mg/l	50	02/26/15 14:46	JB	EPA 300.0/SW846 9056
Total Organic Carbon	242	20	mg/l	20	02/27/15 19:04	AK	SM 5310B-2011
pH	7.42		su	1	02/26/15 15:15	TB	SM4500HB + -2011/9040C

(a) Elevated detection limit due to matrix interference.

RL = Reporting Limit

## Report of Analysis

Client Sample ID:	TANK-1	Date Sampled:	02/25/15
Lab Sample ID:	D68026-1F	Date Received:	02/25/15
Matrix:	AQ - Water Filtered	Percent Solids:	n/a
Project:	Wattenberg Tank		

## Dissolved Metals Analysis

Analyte	Result	RL	Units	DF	Prep	Analyzed By	Method	Prep Method
Calcium	240000	20000	ug/l	5	02/27/15	02/27/15 KV	SW846 6010C <sup>1</sup>	SW846 3010A <sup>2</sup>
Magnesium	38700	10000	ug/l	5	02/27/15	02/27/15 KV	SW846 6010C <sup>1</sup>	SW846 3010A <sup>2</sup>
Potassium	148000	50000	ug/l	5	02/27/15	02/27/15 KV	SW846 6010C <sup>1</sup>	SW846 3010A <sup>2</sup>
Sodium	4490000	20000	ug/l	5	02/27/15	02/27/15 KV	SW846 6010C <sup>1</sup>	SW846 3010A <sup>2</sup>

(1) Instrument QC Batch: MA5833

(2) Prep QC Batch: MP15341

RL = Reporting Limit



## Misc. Forms

---

5

## Custody Documents and Other Forms

---

Includes the following where applicable:

- Chain of Custody





## Accutest Laboratories Sample Receipt Summary

Accutest Job Number: D68026 Client: K.P KAUFFMAN COMPANY, INC Project: WATTENBERG TANK  
Date / Time Received: 2/25/2015 1:15:00 PM Delivery Method: Airbill #'s: CO  
Cooler Temps (Initial/Adjusted): #1: (5/5):

### Cooler Security

	Y	or	N		Y	or	N
1. Custody Seals Present:	<input checked="" type="checkbox"/>		<input type="checkbox"/>	3. COC Present:	<input checked="" type="checkbox"/>		<input type="checkbox"/>
2. Custody Seals Intact:	<input checked="" type="checkbox"/>		<input type="checkbox"/>	4. Smpl Dates/Time OK	<input checked="" type="checkbox"/>		<input type="checkbox"/>

### Cooler Temperature

	Y	or	N
1. Temp criteria achieved:	<input checked="" type="checkbox"/>		<input type="checkbox"/>
2. Cooler temp verification:	IR Gun:		
3. Cooler media:	Ice (Bag)		
4. No. Coolers:	1		

### Quality Control Preservation

	Y	or	N	N/A
1. Trip Blank present / cooler:	<input type="checkbox"/>		<input type="checkbox"/>	<input checked="" type="checkbox"/>
2. Trip Blank listed on COC:	<input type="checkbox"/>		<input type="checkbox"/>	<input checked="" type="checkbox"/>
3. Samples preserved properly:	<input checked="" type="checkbox"/>		<input type="checkbox"/>	
4. VOCs headspace free:	<input type="checkbox"/>		<input type="checkbox"/>	<input checked="" type="checkbox"/>

Comments

### Sample Integrity - Documentation

	Y	or	N
1. Sample labels present on bottles:	<input checked="" type="checkbox"/>		<input type="checkbox"/>
2. Container labeling complete:	<input checked="" type="checkbox"/>		<input type="checkbox"/>
3. Sample container label / COC agree:	<input checked="" type="checkbox"/>		<input type="checkbox"/>

### Sample Integrity - Condition

	Y	or	N
1. Sample recvd within HT:	<input checked="" type="checkbox"/>		<input type="checkbox"/>
2. All containers accounted for:	<input checked="" type="checkbox"/>		<input type="checkbox"/>
3. Condition of sample:	Intact		

### Sample Integrity - Instructions

	Y	or	N	N/A
1. Analysis requested is clear:	<input checked="" type="checkbox"/>		<input type="checkbox"/>	
2. Bottles received for unspecified tests	<input type="checkbox"/>		<input checked="" type="checkbox"/>	
3. Sufficient volume recvd for analysis:	<input checked="" type="checkbox"/>		<input type="checkbox"/>	
4. Compositing instructions clear:	<input type="checkbox"/>		<input type="checkbox"/>	<input checked="" type="checkbox"/>
5. Filtering instructions clear:	<input type="checkbox"/>		<input type="checkbox"/>	<input checked="" type="checkbox"/>

Accutest Laboratories  
V:(303) 425-6021

4036 Youngfield Street  
F: (303) 425-6854

Wheat Ridge, CO  
www.accutest.com

D68026: Chain of Custody  
Page 2 of 2

## Metals Analysis

---

## QC Data Summaries

---

Includes the following where applicable:

- Method Blank Summaries
- Matrix Spike and Duplicate Summaries
- Blank Spike and Lab Control Sample Summaries
- Serial Dilution Summaries



BLANK RESULTS SUMMARY  
Part 2 - Method Blanks

Login Number: D68026  
Account: KPKCOD - K.P. Kauffman Company, Inc.  
Project: Wattenberg Tank

QC Batch ID: MP15341  
Matrix Type: AQUEOUS

Methods: SW846 6010C  
Units: ug/l

Prep Date: 02/27/15

Metal	RL	IDL	MDL	MB raw	final
Aluminum	100	8.6	41		
Antimony	30	3.2	19		
Arsenic	25	5.2	5.6		
Barium	10	1.4	1.4		
Beryllium	10	.8	1.2		
Boron	50	6.7	6.6		
Cadmium	10	.4	.36		
Calcium	400	2.2	41	13.6	<400
Chromium	10	.4	.4		
Cobalt	5.0	.4	.57		
Copper	10	1.2	1.9		
Iron	70	2.2	9.5		
Lead	50	3.6	21		
Lithium	5.0	1.9	2.7		
Magnesium	200	14	19	15.9	<200
Manganese	5.0	.01	.46		
Molybdenum	10	.8	.84		
Nickel	30	.9	.87		
Phosphorus	100	15	20		
Potassium	1000	130	270	6.6	<1000
Selenium	50	8.8	11		
Silicon	50	5.2	5.2		
Silver	30	.4	.6		
Sodium	400	4.9	170	1.1	<400
Strontium	5.0	.01	.12		
Thallium	10	2.9	4		
Tin	50	13	16		
Titanium	10	.15	2.1		
Uranium	50	3.7	5.5		
Vanadium	10	.4	.4		
Zinc	30	.6	3.2		

Associated samples MP15341: D68026-1F

Results < IDL are shown as zero for calculation purposes  
(\*) Outside of QC limits

BLANK RESULTS SUMMARY  
Part 2 - Method Blanks

Login Number: D68026  
Account: KPKCOD - K.P. Kauffman Company, Inc.  
Project: Wattenberg Tank

QC Batch ID: MP15341  
Matrix Type: AQUEOUS

Methods: SW846 6010C  
Units: ug/l

Prep Date: 02/27/15

Metal	RL	IDL	MDL	MB	
				raw	final

(anr) Analyte not requested

MATRIX SPIKE AND DUPLICATE RESULTS SUMMARY

Login Number: D68026  
 Account: KPKCOD - K.P. Kauffman Company, Inc.  
 Project: Wattenberg Tank

QC Batch ID: MP15341  
 Matrix Type: AQUEOUS

Methods: SW846 6010C  
 Units: ug/l

Prep Date: 02/27/15

Metal	D67782-2F Original MS	Spikelot ICPALL2	% Rec	QC Limits
Aluminum				
Antimony				
Arsenic				
Barium				
Beryllium				
Boron				
Cadmium				
Calcium	258000	280000	25000	88.0 75-125
Chromium	anr			
Cobalt				
Copper				
Iron	anr			
Lead				
Lithium				
Magnesium	256000	287000	25000	124.0 75-125
Manganese				
Molybdenum				
Nickel				
Phosphorus				
Potassium	6600	33200	25000	106.4 75-125
Selenium				
Silicon				
Silver				
Sodium	500000	532000	25000	128.0(a) 75-125
Strontium				
Thallium				
Tin				
Titanium				
Uranium				
Vanadium				
Zinc				

Associated samples MP15341: D68026-1F

Results < IDL are shown as zero for calculation purposes  
 (\*) Outside of QC limits

6.1.2  
 6

MATRIX SPIKE AND DUPLICATE RESULTS SUMMARY

Login Number: D68026  
 Account: KPKCOD - K.P. Kauffman Company, Inc.  
 Project: Wattenberg Tank

QC Batch ID: MP15341  
 Matrix Type: AQUEOUS

Methods: SW846 6010C  
 Units: ug/l

Prep Date: 02/27/15

	D67782-2F	Spikelot	QC
Metal	Original MS	ICPALL2 % Rec	Limits

(N) Matrix Spike Rec. outside of QC limits  
 (anr) Analyte not requested  
 (a) Spike amount low relative to the sample amount. Refer to lab control or spike blank for recovery information.

6.12  
6

MATRIX SPIKE AND DUPLICATE RESULTS SUMMARY

Login Number: D68026  
 Account: KPKCOD - K.P. Kauffman Company, Inc.  
 Project: Wattenberg Tank

QC Batch ID: MP15341  
 Matrix Type: AQUEOUS

Methods: SW846 6010C  
 Units: ug/l

Prep Date: 02/27/15

Metal	D67782-2F Original MSD	Spikelot ICPALL2	% Rec	MSD RPD	QC Limit	
Aluminum						
Antimony						
Arsenic						
Barium						
Beryllium						
Boron						
Cadmium						
Calcium	258000	281000	25000	92.0	0.4	20
Chromium	anr					
Cobalt						
Copper						
Iron	anr					
Lead						
Lithium						
Magnesium	256000	298000	25000	168.0(a)	3.8	20
Manganese						
Molybdenum						
Nickel						
Phosphorus						
Potassium	6600	34200	25000	110.4	3.0	20
Selenium						
Silicon						
Silver						
Sodium	500000	549000	25000	196.0(a)	3.1	20
Strontium						
Thallium						
Tin						
Titanium						
Uranium						
Vanadium						
Zinc						

Associated samples MP15341: D68026-1F

Results < IDL are shown as zero for calculation purposes  
 (\*) Outside of QC limits

MATRIX SPIKE AND DUPLICATE RESULTS SUMMARY

Login Number: D68026  
 Account: KPKCOD - K.P. Kauffman Company, Inc.  
 Project: Wattenberg Tank

QC Batch ID: MP15341  
 Matrix Type: AQUEOUS

Methods: SW846 6010C  
 Units: ug/l

Prep Date: 02/27/15

	D67782-2F	Spikelot	MSD	QC
Metal	Original MSD	ICPALL2 % Rec	RPD	Limit

(N) Matrix Spike Rec. outside of QC limits  
 (anr) Analyte not requested  
 (a) Spike amount low relative to the sample amount. Refer to lab control or spike blank for recovery information.

6.1.2  
 6

## SPIKE BLANK AND LAB CONTROL SAMPLE SUMMARY

Login Number: D68026  
Account: KPKCOD - K.P. Kauffman Company, Inc.  
Project: Wattenberg Tank

QC Batch ID: MP15341  
Matrix Type: AQUEOUS

Methods: SW846 6010C  
Units: ug/l

Prep Date: 02/27/15

Metal	BSP Result	Spikelot ICPALL2	% Rec	QC Limits
Aluminum				
Antimony				
Arsenic				
Barium				
Beryllium				
Boron				
Cadmium				
Calcium	24900	25000	99.6	80-120
Chromium	anr			
Cobalt				
Copper				
Iron	anr			
Lead				
Lithium				
Magnesium	25300	25000	101.2	80-120
Manganese				
Molybdenum				
Nickel				
Phosphorus				
Potassium	25200	25000	100.8	80-120
Selenium				
Silicon				
Silver				
Sodium	25100	25000	100.4	80-120
Strontium				
Thallium				
Tin				
Titanium				
Uranium				
Vanadium				
Zinc				

Associated samples MP15341: D68026-1F

Results < IDL are shown as zero for calculation purposes  
(\*) Outside of QC limits

SPIKE BLANK AND LAB CONTROL SAMPLE SUMMARY

Login Number: D68026  
 Account: KPKCOD - K.P. Kauffman Company, Inc.  
 Project: Wattenberg Tank

QC Batch ID: MP15341  
 Matrix Type: AQUEOUS

Methods: SW846 6010C  
 Units: ug/l

Prep Date: 02/27/15

Metal	BSP Result	Spikelot ICPALL2	% Rec	QC Limits
-------	---------------	---------------------	-------	--------------

(anr) Analyte not requested

6.1.3  
6

# SERIAL DILUTION RESULTS SUMMARY

Login Number: D68026  
 Account: KPKCOD - K.P. Kauffman Company, Inc.  
 Project: Wattenberg Tank

QC Batch ID: MP15341  
 Matrix Type: AQUEOUS

Methods: SW846 6010C  
 Units: ug/l

Prep Date: 02/27/15

Metal	D67782-2F Original SDL 1:5	%DIF	QC Limits
-------	-------------------------------	------	--------------

Aluminum			
Antimony			
Arsenic			
Barium			
Beryllium			
Boron			
Cadmium			
Calcium	258000	302000	17.2*(a) 0-10
Chromium	anr		
Cobalt			
Copper			
Iron	anr		
Lead			
Lithium			
Magnesium	256000	288000	12.3*(a) 0-10
Manganese			
Molybdenum			
Nickel			
Phosphorus			
Potassium	6600	7270	10.1*(a) 0-10
Selenium			
Silicon			
Silver			
Sodium	500000	557000	11.3*(a) 0-10
Strontium			
Thallium			
Tin			
Titanium			
Uranium			
Vanadium			
Zinc			

Associated samples MP15341: D68026-1F

Results < IDL are shown as zero for calculation purposes  
 (\*) Outside of QC limits

# SERIAL DILUTION RESULTS SUMMARY

Login Number: D68026  
 Account: KPKCOD - K.P. Kauffman Company, Inc.  
 Project: Wattenberg Tank

QC Batch ID: MP15341  
 Matrix Type: AQUEOUS

Methods: SW846 6010C  
 Units: ug/l

Prep Date: 02/27/15

	D67782-2F		QC
Metal	Original SDL 1:5	%DIF	Limits

(anr) Analyte not requested  
 (a) Serial dilution indicates possible matrix interference.

6.14  
6

## General Chemistry

---

## QC Data Summaries

---

Includes the following where applicable:

- Method Blank and Blank Spike Summaries
- Duplicate Summaries
- Matrix Spike Summaries

METHOD BLANK AND SPIKE RESULTS SUMMARY  
GENERAL CHEMISTRY

Login Number: D68026  
Account: KPKCOD - K.P. Kauffman Company, Inc.  
Project: Wattenberg Tank

Analyte	Batch ID	RL	MB Result	Units	Spike Amount	BSP Result	BSP %Recov	QC Limits
Bromide	GP14727/GN28842	0.050	0.0	mg/l	0.5	0.508	101.6	90-110%
Chloride	GP14727/GN28842	0.50	0.0	mg/l	5	5.10	102.0	90-110%
Fluoride	GP14727/GN28842	0.10	0.0	mg/l	1	1.01	101.0	90-110%
HEM Oil and Grease	GP14739/GN28877	5.0	0.0	mg/l	40	36.6	91.5	78-114%
Nitrogen, Nitrate	GP14727/GN28842	0.010	0.0	mg/l	0.1	0.102	102.0	90-110%
Nitrogen, Nitrite	GP14727/GN28842	0.0040	0.0	mg/l	0.05	0.0523	104.6	90-110%
Solids, Total Dissolved	GN28824	10	0.0	mg/l	400	400	100.0	90-110%
Sulfate	GP14727/GN28842	0.50	0.0	mg/l	5	4.95	99.0	90-110%
Total Organic Carbon	GP14737/GN28876	1.0	0.0	mg/l	8.82	9.06	102.7	90-110%
pH	GN28836			su	8.00	7.97	99.6	99.1-100.9

Associated Samples:

Batch GN28824: D68026-1  
Batch GN28836: D68026-1  
Batch GP14727: D68026-1  
Batch GP14737: D68026-1  
Batch GP14739: D68026-1  
(\*) Outside of QC limits

BLANK SPIKE DUPLICATE RESULTS SUMMARY  
GENERAL CHEMISTRY

Login Number: D68026  
Account: KPKCOD - K.P. Kauffman Company, Inc.  
Project: Wattenberg Tank

Analyte	Batch ID	Units	Spike Amount	BSD Result	RPD	QC Limit
HEM Oil and Grease	GP14739/GN28877	mg/l	40	35.8	2.2	20%

Associated Samples:  
Batch GP14739: D68026-1  
(\*) Outside of QC limits

7.2  
7

DUPLICATE RESULTS SUMMARY  
GENERAL CHEMISTRY

Login Number: D68026  
Account: KPKCOD - K.P. Kauffman Company, Inc.  
Project: Wattenberg Tank

Analyte	Batch ID	QC Sample	Units	Original Result	DUP Result	RPD	QC Limits
Solids, Total Dissolved	GN28824	D67964-1B	mg/l	19600	19600	0.0	0-20%
Total Organic Carbon	GP14737/GN28876	D67989-1	mg/l	4.1	4.1	0.0	0-20%

Associated Samples:

Batch GN28824: D68026-1

Batch GP14737: D68026-1

(\*) Outside of QC limits

7.3

7

MATRIX SPIKE RESULTS SUMMARY  
GENERAL CHEMISTRY

Login Number: D68026  
Account: KPKCOD - K.P. Kauffman Company, Inc.  
Project: Wattenberg Tank

Analyte	Batch ID	QC Sample	Units	Original Result	Spike Amount	MS Result	%Rec	QC Limits
Bromide	GP14727/GN28842	D68064-1	mg/l	0.47	1	1.5	103.0	80-120%
Chloride	GP14727/GN28842	D68064-1	mg/l	47.4	10	56.1	87.0	80-120%
Fluoride	GP14727/GN28842	D68064-1	mg/l	1.9	2	3.7	90.0	80-120%
HEM Oil and Grease	GP14739/GN28877	D68033-1	mg/l	2.4	40	41.0	96.5	78-114%
Nitrogen, Nitrate	GP14727/GN28842	D68064-1	mg/l	0.0	0.2	0.20	100.0	80-120%
Nitrogen, Nitrite	GP14727/GN28842	D68064-1	mg/l	0.024	0.1	0.12	96.0	80-120%
Sulfate	GP14727/GN28842	D68064-1	mg/l	0.61	10	10.2	95.9	80-120%
Total Organic Carbon	GP14737/GN28876	D67989-1	mg/l	4.1	10	13.8	97.0	80-120%

Associated Samples:

Batch GP14727: D68026-1

Batch GP14737: D68026-1

Batch GP14739: D68026-1

(\*) Outside of QC limits

(N) Matrix Spike Rec. outside of QC limits

7.4

7

MATRIX SPIKE DUPLICATE RESULTS SUMMARY  
GENERAL CHEMISTRY

Login Number: D68026  
Account: KPKCOD - K.P. Kauffman Company, Inc.  
Project: Wattenberg Tank

Analyte	Batch ID	QC Sample	Units	Original Result	Spike Amount	MSD Result	RPD	QC Limit
Bromide	GP14727/GN28842	D68064-1	mg/l	0.47	1	1.5	0.0	20%
Chloride	GP14727/GN28842	D68064-1	mg/l	47.4	10	56.1	0.0	20%
Fluoride	GP14727/GN28842	D68064-1	mg/l	1.9	2	3.7	0.0	20%
Nitrogen, Nitrate	GP14727/GN28842	D68064-1	mg/l	0.0	0.2	0.20	0.0	20%
Nitrogen, Nitrite	GP14727/GN28842	D68064-1	mg/l	0.024	0.1	0.13	8.0	20%
Sulfate	GP14727/GN28842	D68064-1	mg/l	0.61	10	10.1	1.0	20%
Total Organic Carbon	GP14737/GN28876	D67989-1	mg/l	4.1	10	13.7	0.7	20%

Associated Samples:

Batch GP14727: D68026-1

Batch GP14737: D68026-1

(\*) Outside of QC limits

(N) Matrix Spike Rec. outside of QC limits

7.5  
7